

ZOOLOGY

Paper II : Biochemistry and Animal Physiology-I (ZOO-302)

Time Allowed : Three Hours

Maximum Marks : 36

Note : Attempt five questions in all, at least one from each Unit. Question No. 1 is compulsory. Draw neat and well-labelled diagrams wherever required.

1. Write short notes on :

- (a) Aldoses
- (b) Chargaff's rules
- (c) Non-protein enzymes
- (d) Energy balance of glycolysis

- (e) Difference between extracellular and intracellular digestion
 (f) Bohr effect
 (g) Agranulocytes
 (h) Blood pressure

1×8=8

UNIT-I

2. (a) Write note on scope of biochemistry. 3
 (b) Give a brief description of isomerism in monosaccharides. 4
 3. (a) Describe characteristics of alpha helix secondary structure of proteins. 4
 (b) Give a brief account of characteristics and functions of mRNA. 3

UNIT-II

4. (a) What are various properties of enzymes? 3
 (b) What are hydrolases enzymes and their different types? 4
 5. (a) Explain the process of glycogenolysis in brief. 3 1/2
 (b) Make a flow diagram to explain the process of glycolysis. 3 1/2

UNIT-III

6. Explain the digestion and absorption of proteins in humans. 7
 7. Write notes on the following :
 (a) Oxygen dissociation curve of haemoglobin 3 1/2
 (b) Chloride shift 3 1/2

UNIT-IV

8. Write notes on the following :
 (a) Plasma proteins and their functions 4
 (b) ABO blood grouping system 3
 9. Give a detailed account of origin and regulation of heart beat. 7

UNIT-V (Compulsory)